

9

Date: Tuesday, 2/5/2008 11:06:41 AM
User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BEARPAW KIT (19"X24")
Job Number : 37200	
Estimate Number : 10323	
P.O. Number :	Part Number : D206559013
This Issue : 2/5/2008 S.O. No. :	Drawing Number : D2432 REV F3
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : MACHINED PARTS	Drawing Revision : F3
Previous Run : 36588	Material :
Written By :	Due Date : 2/25/2008 Qty: 5 Um: Each
Checked & Approved By : <u>08 02 05</u>	
Comment : Est Rev: 04.02.17 Blank size changed KJ/JLM	
Est Rev:K 07-01-02 Was K10008 JLM	
Est Rev:L 08-01-09 Added Step 2 JLM Verified	
By:EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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5
KS 08.02.11

Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels per PPP D206-559-013 CHG005

08/03/04

2.0	MFG ENGINEERING	MFG ENGINEERING
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Comment: MFG ENGINEERING

Program Batch Number

08.02.22

3.0	MUHMWB10	UHMW 1" Black
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Comment: Qty.: 6.8250 sf(s)/Unit Total : 34.1250 sf(s)

blank: 19.500" x 24.00" x 1.00" thick (+0.030/-0.000) per DSK086-5

Material: Black UHMW 1"

(MUHMWB10)

Batch: 1107067

08/02/27

5

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

Note:(2) bearpaws for (1) Kit

1-Inspect material for defects or damage prior to machining

2-Machine as per Folio and Dwg D2432 Identify as D2432F

3-Deburr

J.L 08/02/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 2/5/2008 11:06:41 AM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARPAW KIT (19"X24")

Job Number: 37200

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Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JL 08/02/09

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 08/02/09

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

8.0

D2182B

Neoprene Cushion-.750 bl



Comment: Qty.: 2.5000 f(s)/Unit Total : 12.5000 f(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 D2182B050 Rubber Cushion

34777

AS 08/03/04 (XS)

9.0

D2274

Radius Block



Comment: Qty.: 12.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 D2274 Radius Block

2 D2432F(ref only) Bearpaw

35205

AS 08/03/04 (XS)

10.0

D2438

Clamp



Comment: Qty.: 6.0000 Each(s)/Unit Total : 30.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 D2438 Clamp

B36508

AS 08/03/04 (XS)

11.0

D2529

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

B35356

AS 08/03/04 XS

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 2/5/2008 11:06:41 AM
User: Kim Johnston

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARPAW KIT (19"X24")

Job Number: 37200

Part Number: D206559013

Job Number:



Seq. #:

Machine Or Operation:

Description :

12 D2529

Washer

B35356

AS 08/03/04

(X5)

12.0

D2732

Rubber Extrusion



Comment: Qty.: 10.4160 f(s)/Unit Total : 52.0800 f(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 D2732-050 Rubber Cushion

B34717

AS 08/03/04

(X5)

13.0

AN415A

Bolt



Comment: Qty.: 12.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 AN4-15A

Bolt

M106375

AS 08/03/04

(X5)

14.0

AN417A

Bolt



Comment: Qty.: 12.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 AN4-17A

Bolt

M105653

AS 08/03/04

(X5)

15.0

AN960JD416

Washer



Comment: Qty.: 24.0000 Each(s)/Unit Total : 120.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

24 AN960JD416

Washer

M106277

AS 08/03/04

(X5)

16.0

MS21042L4

Nut



Comment: Qty.: 12.0000 Each(s)/Unit Total : 60.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 MS21042L4

Nut (or -4)

M105938

AS 08/03/04

(X5)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: D Date: 08/03/06
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 2/5/2008 11:06:41 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARPAW KIT (19"X24")

Job Number: 37200

Part Number: D206559013

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

2008/03/04 (5)

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPPD206-559-013

Location: A

2/3/4 sel (5X)

19.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

2008/03/06 (5)

Job Completion



2008/3/05 (5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	37200
Description: Bearpaw		Part Number:	D2432
Inspection Dwg: D2432 Rev: F3		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	0.061 x 45°	✓			
B	5.500	+/-0.030					
C	0.200	+/-0.030					
D	0.25 x 45°	+/-0.030					
E	R0.250	+/-0.030					
F	0.250	+/-0.010					
G	0.625	+/-0.030					
H	0.375	+/-0.010					
I	0.950	+0.030/0.010					
J	19.000	+/-0.030					
K	3.14	+/-0.030					
L	3.28	+/-0.030					
M	Ø0.260	+0.005/-0.000					
N	Ø0.93	+/-0.030					
O	0.30	+0.030/-0.000					
P	23.750	+/-0.030					
Q	7.375	+/-0.030					
R	4.250	+/-0.010					
S	2.000	+/-0.030					
T	9.000	+/-0.010					
U	9.000	+/-0.010					
V	0.375	+/-0.010					

Name as
 2772410
 W/O

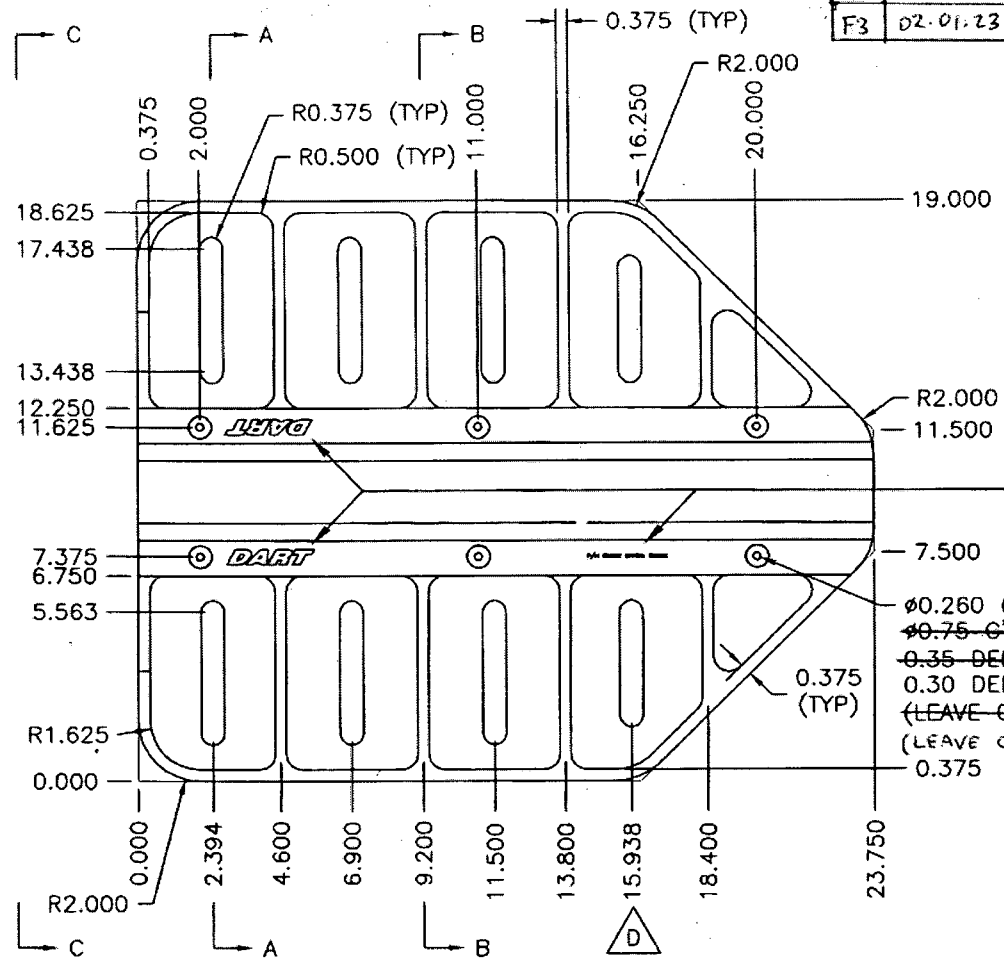
Measured by:	Audited by:	Prototype Approval:	N/A
Date:	Date:	Date:	

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O K10008/D206-559-015	KJ/RF	TH



RELEASED
98.06.17 KE

F1	99.03.03	ADD DEO 9143
F2	01.03.28	Ø0.93 WAS Ø0.75 RF
F3	02.01.23	CLARIFY BORE DIMS RF



ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)

Ø0.260 (TYP)
~~Ø0.75 C'BORE~~ Ø0.93 C'BORE
0.35 DEEP FROM TOP (MIN.)
0.30 DEEP FROM BOTTOM
(LEAVE 0.300 MIN.)
(LEAVE 0.650 MIN.)

F2
F1
F
F1

EFFECTIVE	DEOS
9143	

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
KE	KE	
CHECKED	APPROVED	DRAWING NO.
MM	JS	D2432
DATE	TITLE	REV. F
98.05.12	BEARPAW	SHEET 1 OF 2
A	95.10.31	NEW ISSUE
B	96.01.24	RE-DESIGN
C	96.03.26	CHANGE BORE AND C'BORE DEPTH
D	96.06.04	MOVE SLOT
E	97.02.27	CHANGE C'BORE DEPTH, BORE RADIUS
F	98.05.12	CHANGE C'BORE, ADD B AND F P/N

FLAT PATTERN

NO. 37200
WORK ORDER
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
RETURN TO
ENGINEERING
SHOP COPY

BEND AFTER MACHINING
(D2432B ONLY)

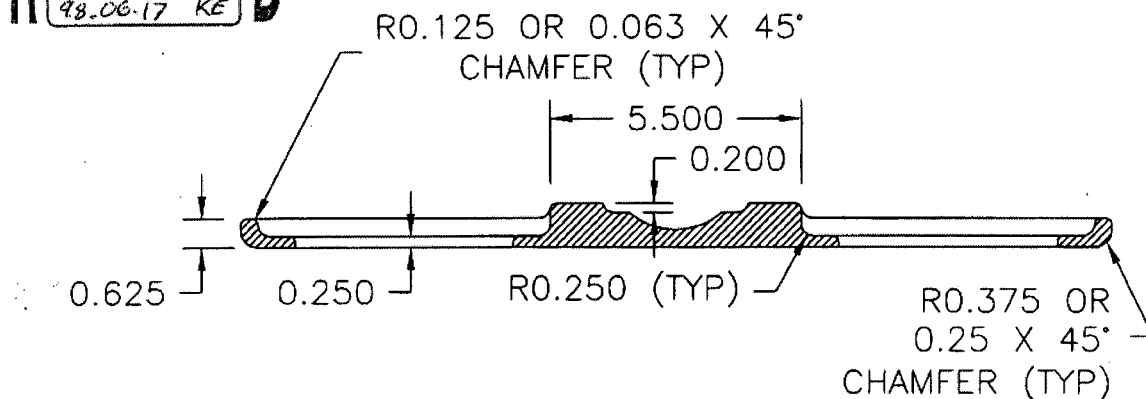
D2432F: FLAT BEARPAW
D2432B: BENT BEARPAW

MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)

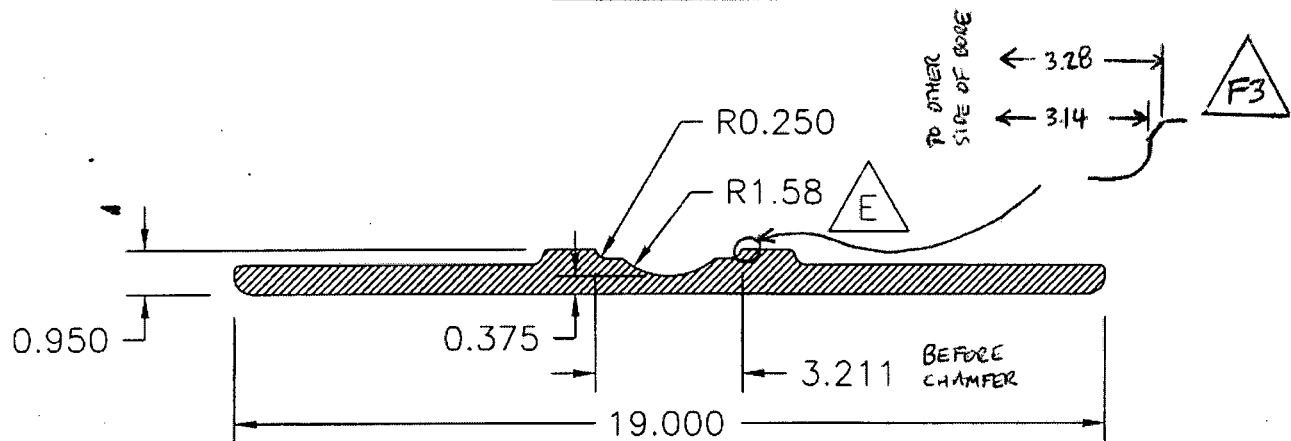


DESIGN KE	DRAWN BY KE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED MK	APPROVED [Signature]	DRAWING NO. D2432	REV. F SHEET 2 OF 2
DATE 98.05.12	TITLE BEARPAW		SCALE 1:4

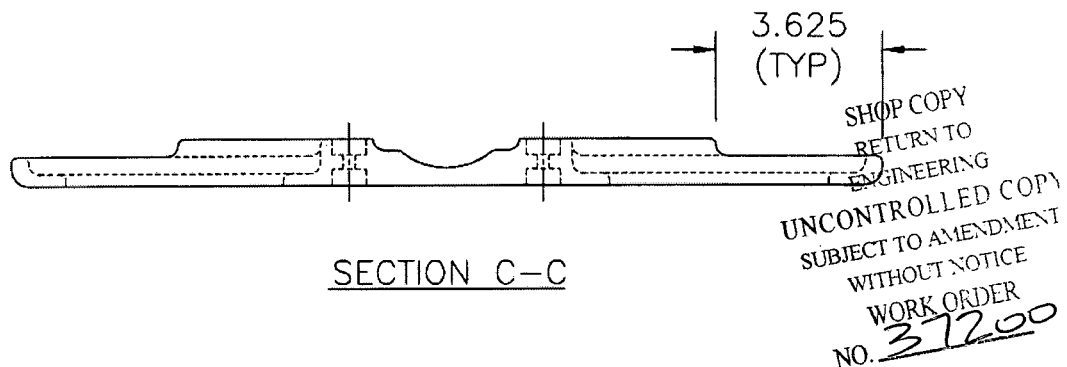
RELEASED
98.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 37200

DART AEROSPACE LTD		Work Order:	37246
Description: Bearpaw		Part Number:	D2432
Inspection Dwg: D2432 Rev: F3		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	.057 x 45°				
B	5.500	+/-0.030	5.500				
C	0.200	+/-0.030	.200				
D	0.25 x 45°	+/-0.030	.25 x 45°				
E	R0.250	+/-0.030	R.250				
F	0.250	+/-0.010	.245				
G	0.625	+/-0.030	.620				
H	0.375	+/-0.010	.377				
I	0.950	+0.030/0.010	.952				
J	19.000	+/-0.030	19.000				
K	3.14	+/-0.030	3.120				
L	3.28	+/-0.030	3.200				
M	Ø0.260	+0.005/-0.000	Ø.253				
N	Ø0.93	+/-0.030	Ø.928				
O	0.30	+0.030/-0.000	.307				
P	23.750	+/-0.030	23.750				
Q	7.375	+/-0.030	7.378				
R	4.250	+/-0.010	4.250				
S	2.000	+/-0.030	2.000				
T	9.000	+/-0.010	8.997				
U	9.000	+/-0.010	9.005				
V	0.375	+/-0.010	.378				

Measured by: HA/Eny	Audited by: J.F	Prototype Approval:	N/A
Date: 08/02/24	Date: 08/02/24	Date:	

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O K10008/D206-559-015	KJ/RF	JF